



UNITED STATES PATENT AND TRADEMARK OFFICE

42
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/928,818

08/13/2001

Eric N. Mann

0325.00484

8343

21363

7590

12/16/2003

CHRISTOPHER P. MAIORANA, P.C.
24025 GREATER MACK
SUITE 200
ST. CLAIR SHORES, MI 48080

EXAMINER

COX, CASSANDRA F

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,818

Applicant(s)

MANN ET AL.

Examiner

Cassandra Cox

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8,10-19 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19 is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8,10-13 and 21 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. Applicant's arguments, see Applicant remarks, filed 09/22/03, with respect to claim 1 have been fully considered and are persuasive. The rejection of claim 1 has been withdrawn.

Claim Objections

2. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 should be deleted because applicant has now included the limitations of the claim into independent claim 1.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-5, 7-8, and 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is not clear to the examiner if the digitally controlled reference loop circuit is a separate circuit from the control circuit. It appears to the examiner from reviewing the specification and the drawings that the control circuit

is actually a part of the digitally controlled reference loop circuit. Correction or clarification is required.

Claims 2-5, 7-8, and 10-12 are also rejected due to the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Friedrich et al. (U.S. Patent No. 6,433,599).

In reference to claim 13, Friedrich discloses in Figure 1 an apparatus comprising means (1, 2, 3, 4, 5) for generating a second reference signal (CLOCK) in response to (i) a first reference signal (f_{Ref}) and (ii) a timing signal (the output of VCO 4), wherein (a) a frequency and a phase of the second reference signal (CLOCK) are adjusted in response to the first reference signal (f_{Ref}) and (ii) held when the first reference signal (f_{Ref}) is lost and (b) the first reference signal (f_{Ref}) comprises an external timing signal (the signal (f_{Ref}) itself is seen to be an external timing signal; and means (6, 7, 8) for generating one or more output signals (output of VCO 7) in response to the second

reference signal (CLOCK) and one of the one or more output signals (output of VCO 7), wherein the one or more output signals has a controlled and/or substantially zero delay with respect to the first reference signal (f_{Ref}), wherein the apparatus is implemented on a single integrated circuit chip (see ABSTRACT).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Friedrich et al. (U.S. Patent No. 6,433,599).

In reference to claim 21, Friedrich discloses in Figure 1 an apparatus comprising a first circuit (1, 2, 3, 4, 5) configured to generate a second reference signal (CLOCK) in response to (i) a first reference signal (f_{Ref}) and (ii) a timing signal (the output of VCO 4), wherein (a) a frequency and a phase of the second reference signal (CLOCK) are adjusted in response to the first reference signal (f_{Ref}) and (ii) held when the first reference signal (f_{Ref}) is lost and (b) the first reference signal (f_{Ref}) comprises an external timing signal (the signal (f_{Ref}) itself is seen to be an external timing signal), wherein the first circuit comprises a digitally controlled reference loop circuit; and a second circuit (6, 7, 8) configured to generate one or more output signals (output of VCO 7) in response to the second reference signal (CLOCK) and one of the one or more output signals

(output of VCO 7), wherein (i) the one or more output signals has a controlled and/or substantially zero delay with respect to the first reference signal (f_{Ref}) and (ii) the second circuit (6,7,8) comprises (a) a phase locked loop (6, 7,8) configured to generate a clock signal in response to the second reference signal (CLOCK) and the one or more output signals (output of VCO 7). Friedrich does not disclose that the second circuit comprises a buffer circuit configured to generate the one or more output signals in response to the clock signal. However, it would have been obvious to one skilled in the art at the time of the invention that a buffer could be added at the output of the VCO (7) for the advantage of cleaning up the output signal of the VCO (7) so that the phase locked loop can more accurately synchronize the output signal with the second reference signal (CLOCK).

Allowable Subject Matter

9. Claims 14-19 are allowed.
10. Claims 3-5, 7-8, and 10-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
11. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.
12. The following is a statement of reasons for the indication of allowable subject matter: Claims 1, 3-5, 7-8, and 10-12 are allowable because the closest prior art of record fails to disclose a circuit as shown in Figure 2 wherein the first circuit (110)

comprises an oscillator 122 configured to generate the second reference signal (REF) in response to the control signal (Ctrl) and the timing signal (Xin) in combination with the rest of the limitations of the base claim and any intervening claims.

13. The following is an examiner's statement of reasons for allowance: Claims 14-19 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 3 wherein the second reference signal (Ref) comprises a crystal oscillator signal (X_{IN}) in combination with the rest of the limitations of the base claims and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

14. Applicant's arguments filed 09/22/03 have been fully considered but they are not persuasive. Applicant's arguments with respect to claim 1 have been considered and are withdrawn. Applicant's arguments with respect to claim 13 have been considered but are not persuasive. Applicant argues that the claim (13) has been amended to overcome the rejection, however from the examiner's review the claim has not been amended therefore the rejection stands. Applicant's assertion that the newly presented claim 21 incorporates allowable subject matter of claim 3 is not persuasive because the examiner did not previously disclose any allowable subject matter in claim 3. Since

newly presented claim 21 is simply an independent version of previously rejected claims 1 and 3, the new claim 21 is rejected for the same reasons as previously rejected claim 3.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cassandra Cox whose telephone number is 703-306-5735. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM and on alternate Fridays from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (703)-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

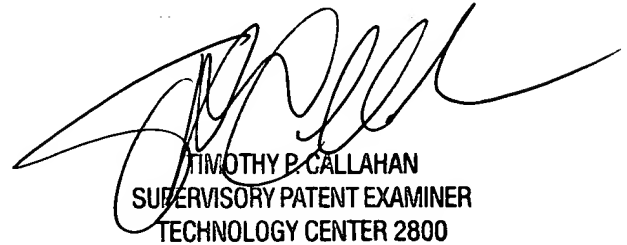
Art Unit: 2816

872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

CC
CC

December 15, 2003



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800